

DWPI

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TITLE: Decorative surfacing sheet for abrasion resistant  
laminates - made by  
coating and impregnation of decor paper with liq. thermosetting  
resin contg.

abrasion fine particles

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EP 186257 A	July 2, 1986	E 025
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JP 61152896 A	July 11, 1986	N/A 000
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BR 8502576 A	December 23, 1986	N/A 000
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US 4713138 A	December 15, 1987	N/A 000
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IL 75058 A	February 28, 1989	N/A 000
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CA 1259535 A	September 19, 1989	N/A 000
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EP 186257 B	April 18, 1990	N/A 000
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DE 3577218 G	May 23, 1990	N/A 000
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JP 2556466 B2	November 20, 1996	N/A 010

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US 4123579

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APPLICATION-DATA:

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EP 186257A	N/A	1985EP-0303038
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JP61152896A	N/A	1985JP-0098882
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US 4713138A	N/A	1984US-0686350
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RELATED-ACC-NO: 1991-252051;1992-096225

ABSTRACTED-PUB-NO: EP 186257A

BASIC-ABSTRACT: Decorative paper for use in the mfr. of  
abrasion-resistant

laminates without an overlay paper, is made by (a) preparing a  
mixt. of a liq.

thermosettable saturating resin (I) and an abrasion-resistant  
compsn. (II), the

mixt. during coating and impregnation having a viscosity of no  
greater than ca.

200 centipoise; the (II) being a mixt. of (i) an  
abrasion-resistant hard

mineral (IIa) of fine particle size in an amt. sufficient to  
provide an

abrasion resistant layer without interfering with visibility, and  
(ii) binder

material (IIb) for (i) capable of withstanding the subsequent  
laminating

conditions and being compatible with the (I), (IIb) being present  
in an amt.

sufficient to bind the (IIa) to the surface of the decor sheet  
and the (IIb)

suspending the particles (IIa) in the (I); (b) coating and  
impregnating the

mixt. in one step over the facing surface of the decor sheet at a  
rate such

that the sheet becomes essentially satd. with the liq. resin and  
(II) becomes

deposited on the facing surface in an ultra thin layer, the mixt.  
having a

viscosity of not more than 200 centipoise during satn. of the  
decor sheet; and

(c) drying the coated and impregnated sheet at an elevated temp.

ADVANTAGE - The abrasion resistant particles remain in suspension  
during

processing and the base sheet is impregnated and the  
abrasion-resis tant layer

is applied in a single processing step without intermediate  
drying or double

handling. The impregnated/coated papers give high or low  
pressure laminates

with a durable abrasion resistant surface which is free from  
mottling and other

defects, without using an overlay paper.

ABSTRACTED-PUB-NO: EP 186257B

EQUIVALENT-ABSTRACTS: A method of providing decor paper for use in the manufacture of abrasion-resistant decorative laminates without an overlay

layer, the method comprising providing a liquid thermosettable saturating resin

and an abrasion-resistant composition for coating and impregnating the facing

surface of the decor sheet with the abrasion-resistant composition becoming

deposited on said facing surface in an ultra-thin layer, said abrasion-resistant composition comprising a mixture of an abrasion-resistant

hard mineral of fine particle size in quantity sufficient to provide an

abrasion resistant layer without interfering with visibility and binder

material for said mineral, which binder material has the properties of

withstanding the subsequent laminating conditions and being compatible with

said thermosettable resin, said binder being present in an amount sufficient to

bind abrasion-resistant mineral to the surface of said decor sheet; the method

further including coating and impregnating the decor sheet and drying said

coated and impregnated decor sheet at an elevated temperature, characterized

in that a mixture of said liquid thermosettable saturating resin and said

abrasion-resistant composition is prepared with said binder material suspending

said abrasion-resistant hard mineral particles in said liquid thermosettable

impregnating resin, and said coating and impregnating is effected in

essentially one step by coating said mixture of said liquid thermosettable

impregnating resin and said abrasion-resistant composition over the facing

surface of said decor sheet at a rate such that said decor sheet becomes

substantially saturated with said liquid resin and said abrasion-resistant

composition becomes deposited on said facing surface in an ultra-thin layer'

which is not, in the final laminate, of more than about 10.16

micron (0.4 mils)  
and said mixture having a viscosity no greater than about 200  
mPa.s  
(centipoise) during saturation of said decor sheet. (14pp)

US 4713138A

Abrasion resistant decorative laminate is produced by  
simultaneously  
impregnating and a coating a laminate decor sheet with a mixture  
of liquid  
impregnating resin and an abrasion-resistant composition of  
microcrystalline  
cellulose and abrasion-resistant mineral particles such as  
alumina. The liquid  
resin is absorbed leaving a very thin abrasion resistant layer.

ADVANTAGE - Less expensive laminates are obtd. (8pp)1

CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: A94 F09 P42 P73

CPI-CODES: A11-B05; A12-A04A; A12-B03A; F05-A06B;